Amendments to the Specification

IN THE TITLE

Please change USPTO records to indicate that the title to be used in this application is ---ELECTROLESS COPPER PLATING SOLUTION---, which title coincides with the title appearing in the English translation of the specification.

IN THE WRITTEN DESCRIPTION

Please replace paragraph [0008] with the following amended paragraph:

[0008]

Specifically, the present invention is as follows.

(1) An electroless copper plating solution, containing a water-soluble nitrogen-containing polymer, and, glyoxylic acid and phosphinic acid as reducing agents in the electroless copper plating solution.

(2) An electroless copper plating solution according to (1) above, wherein the water-soluble nitrogen-containing polymer is a polyacrylamide or a polyethyleneimine.

(3) An electroless copper plating solution according to (1) or (2) above, wherein an weight average molecular weight (Mw) of the water-soluble nitrogen-containing polymer is at least 100,000, and Mw/Mn (Mn is a number average molecular weight thereof) is 10.0 or less.

~~(4) The electroless copper plating solution according to any of (1) to (3) above, wherein the electroless copper plating solution further contains glyoxylic acid and phosphinic acid as reducing agents.~~

(~~5~~4) An electroless copper plating method, performed using the electroless copper plating solution according to any of (1) to (~~4~~3) above.

Please replace paragraph [0028] and [0029] with the following amended paragraphs:

~~Example 4~~

[0028]

Reference Example 1

The above-mentioned silicon wafer with the tantalum nitride film was pretreated by the same method as in Example 1, after which the wafer was electroless plated with copper for 30 minutes at 80°C. The composition of the plating solution was copper sulfate 0.04 mol/L, ethylenediaminetetraacetate 0.4 mol/L, glyoxylic acid 0.1 mol/L, 2,2'-bipyridyl 10 mg/L, and polyacrylamide (Mw 6,000,000, Mw/Mn = 59.4) 5 mg/L, and the pH was 12.5 (pH regulator: potassium hydroxide). The plating film was deposited in little islands and many portions without deposition were observed. However, when deposited portions were subjected to a tape peel test, the result showed good adhesion, with no peeling at all. Cleavage plane SEM observation revealed that the trench portions had been embedded with no voids. TEM observation for a cross section after annealing revealed the crystal grain size of the trench portions to be small, at about 20 nm, which was the same as the size outside the trenches.

~~Example 5~~

[0029]

Reference Example 2

The above-mentioned silicon wafer with the tantalum nitride film was pretreated by the same method as in Example 1, after which the wafer was electroless plated with copper for 30 minutes at 80°C. The composition of the plating solution was copper sulfate 0.04 mol/L, ethylenediaminetetraacetate 0.4 mol/L, formalin 0.1 mol/L, 2,2'-bipyridyl 10 mg/L, and polyethyleneimine (Mw 10,000,

Mw/Mn = 3.1) 50 mg/L, and the pH was 12.5 (pH regulator: potassium hydroxide). The plating film was deposited in little islands and many portions without deposition were observed. However, when deposited portions were subjected to the tape peel test, the result showed still good adhesion, with no peeling at all. The trench portion exhibited better deposition and cleavage plane SEM observation revealed that the trench portions had been embedded with no voids. TEM observation for a cross section after annealing revealed the crystal grain size of the trench portions to be small, at about 20 nm, which was the same as the size outside the trenches.